

IN THE CLAIMS

Please amend the claims as follows:

1. (Cancelled)
2. (Cancelled)
3. (Cancelled)
4. (Cancelled)
5. (Cancelled)

6. (New) A method for identifying compounds that preferentially block persistent but not transient Na⁺ channels, said method comprising:

providing a cell engineered with K channels and voltage gated Na⁺ channels, and a ouabain-sensitive Na/K ATPase (Na⁺ pump), the Na⁺ channels containing a portion where current is persistent;

adding ouabain to the cell in order to block the Na⁺ pump leading to a small depolarization and a large secondary depolarization, the cell gaining Na⁺ via persistent Na⁺ channels open at near membrane potential;

adding a Na⁺ channel blockers to be identified into said cell;

identifying the added blockers as blocking persistent Na⁺ channels where the added blockers prevents depolarization; and

thereafter determining if the identified added blocker blocks transient Na⁺ current.

7. (New) The method according to claim 6 wherein the determination of the added blockers blocking transient Na^+ current includes:

passing a stimulation current through said cell sufficient to generate an action potential before the addition of the Na^+ channel blocker and after the addition of the Na^+ channel blocker; and

determining if the added blocker blocks the generated action potential and therefore a significant portion of the transient Na^+ current.

8. (New) The method according to claim 7 wherein the determination of whether the added blocker blocks the generated action potential includes disposing a florescent dye into said cell, said florescent dye being sensitive to change in cell membrane potential in order to enable optical measuring of cell membrane potential.

9. (New) The method according to claim 6 wherein a potassium conductance (g_k) of the cell is of a magnitude enabling an addition of potassium to the cell to cause a measurable depolarization and a conductance of a persistent component Na^+ channel ($g_{\text{Na}_{\text{persistent}}}$) sufficiently large to produce a voltage change when extracellular Na^+ is introduced into the well.

10. (New) The method according to claim 6 wherein the cell is engineered with K and Na^+ channels in order that relative conductance of the K channel and a portion of the Na^+ channel, that generates the persistent current are similar.